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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/692,084	10/19/2000	Katherine S. Lam	SOL-130	7954

7590 06/10/2003

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EXAMINER
LANIER, BENJAMIN E

ART UNIT	PAPER NUMBER
2132	5

DATE MAILED: 06/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/692,084	LAM ET AL.	
	Examiner	Art Unit	
	Benjamin E Lanier	2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on May 30, 2007

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-16 and 18-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-16 and 18-24* is/are rejected.

7)☐ Claim(s) ____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 October 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4)☐ Interview Summary (PTO-413) Paper No(s). _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other:

DETAILED ACTION

Response to Amendment

1. Applicant's amendment of claims 1, 7, 8, 12, 18, 19, 23, and 24, along with the cancellation of claims 6 and 17 have been fully considered and have been entered.

Response to Arguments

2. With regards to the Non-Final office action filed February 21, 2003, the Examiner's objection to claims 6-8 and 17-20 arose from a misinterpretation of the claims. Upon further review of the claims and the previously cited references, rejections for claims 1, 6-8, 12, and 17-19, 23, and 24 follow below.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 5, 7, 8, 12, 14, 16, 18, 19, 23, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugisaki, U.S. Patent No. 5,535,275. Referring to claims 1, 7, 8, 12, 18, 19, 23, and 24, Sugisaki discloses method for producing scrambled video signals wherein it is possible to scramble, invert (scrambling key), only a certain number of the least significant bits (Col. 10, lines 65-67, Fig. 6) and the scrambling methods do not render the image completely unrecognizable, but rather only partially scramble the image (degraded), so that the image can be more or less recognized (Col. 11, lines 38-41). It is possible to perform descrambling to restore

the data to its original unscrambled condition (Col. 9, lines 64-67). Sugisaki discloses that the LSB's of each sample or pixel can be scrambled (intra-sample) and that the samples or pixels can be shifted or interchanged based on position data (horizontal inter-sample scrambling)(Col. 10, lines 47-51). Scrambling or shifting is also based on color difference information (Col. 8, lines 10-15)(same weight).

Referring to claims 3 and 14, Sugisaki discloses that the scrambling methods are applied frame wise (Col. 10, lines 12-27, Abstract).

Referring to claims 5 and 16, Sugisaki discloses that the scrambling takes place within the same sample (Figs. 5 & 6).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 4 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugisaki, U.S. Patent No. 5,535,275, in view of Schroeder, U.S. Patent No. 3,784,743. Referring to claims 4 and 15, Sugisaki discloses method for producing scrambled video signals wherein it is possible to scramble, invert (scrambling key), only a certain number of the least significant bits (Col. 10, lines 65-67, Fig. 6) and the scrambling methods do not render the image completely unrecognizable, but rather only partially scramble the image (degraded), so that the image can be more or less recognized (Col. 11, lines 38-41). It is possible to perform descrambling to restore the data to its original unscrambled condition (Col. 9, lines 64-67). Sugisaki discloses that each

sample or pixel can be scrambled (intra-sample) and that the samples or pixels can be shifted or interchanged based on position data (horizontal inter-sample scrambling)(Col. 10, lines 47-51). Scrambling or shifting is also based on color difference information (Col. 8, lines 10-15)(same weight). Sugisaki does not disclose the scrambling key being a pseudo random scrambling key. Schroeder discloses a parallel data scrambler where the scrambling key is a pseudo random key (Abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a pseudo random scrambling key in the method for producing scrambled video signals of Sugisaki because pseudo random keys are well known in the art.

7. Claims 2 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugisaki, U.S. Patent No. 5,535,275, in view of Thompson, U.S. Patent No. 5,185,794. Referring to claims 2 and 13, Sugisaki discloses method for producing scrambled video signals wherein it is possible to scramble, invert (scrambling key), only a certain number of the least significant bits (Col. 10, lines 65-67, Fig. 6) and the scrambling methods do not render the image completely unrecognizable, but rather only partially scramble the image (degraded), so that the image can be more or less recognized (Col. 11, lines 38-41). It is possible to perform descrambling to restore the data to its original unscrambled condition (Col. 9, lines 64-67). Sugisaki discloses that each sample or pixel can be scrambled (intra-sample) and that the samples or pixels can be shifted or interchanged based on position data (horizontal inter-sample scrambling)(Col. 10, lines 47-51). Scrambling or shifting is also based on color difference information (Col. 8, lines 10-15)(same weight). Sugisaki does not disclose having a dynamic range of the sample for scrambling. Thompson discloses having dynamic range data available for the compression (scrambling) modes (Col. 9, lines 25-35). It would have been obvious to one of ordinary skill in the art at the

time the invention was made to scramble the sample of Sugisaki according to a dynamic range in order to ensure that each frame is scrambled according the same range data.

8. Claims 9-11, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugisaki, U.S. Patent No. 5,535,275, in view of Thompson, U.S. Patent No. 5,185,794. Referring to claims 9-11, 20, and 21, Sugisaki discloses method for producing scrambled video signals wherein it is possible to scramble, invert (scrambling key), only a certain number of the least significant bits (Col. 10, lines 65-67, Fig. 6) and the scrambling methods do not render the image completely unrecognizable, but rather only partially scramble the image (degraded), so that the image can be more or less recognized (Col. 11, lines 38-41). It is possible to perform descrambling to restore the data to its original unscrambled condition (Col. 9, lines 64-67). Sugisaki discloses that each sample or pixel can be scrambled (intra-sample) and that the samples or pixels can be shifted or interchanged based on position data (horizontal inter-sample scrambling)(Col. 10, lines 47-51). Scrambling or shifting is also based on color difference information (Col. 8, lines 10-15)(same weight). Sugisaki does not disclose embedding the scrambling key into the sample. Thompson discloses embedding the decryption keys (descrambling key) in the independent data portion of each frame (current, previous) so that the sample can be descrambled (Col. 9, lines 36-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to embed the scrambling key of Sugisaki in the sample in order to descramble as taught in Thompson (Col. 9, lines 36-60).

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugisaki, U.S. Patent No. 5,535,275, in view of Bando, U.S. Patent No. 5,774,548. Referring to claim 22, Sugisaki discloses method for producing scrambled video signals wherein it is possible to

scramble, invert (scrambling key), only a certain number of the least significant bits (Col. 10, lines 65-67, Fig. 6) and the scrambling methods do not render the image completely unrecognizable, but rather only partially scramble the image (degraded), so that the image can be more or less recognized (Col. 11, lines 38-41). It is possible to perform descrambling to restore the data to its original unscrambled condition (Col. 9, lines 64-67). Sugisaki discloses that each sample or pixel can be scrambled (intra-sample) and that the samples or pixels can be shifted or interchanged based on position data (horizontal inter-sample scrambling)(Col. 10, lines 47-51). Scrambling or shifting is also based on color difference information (Col. 8, lines 10-15)(same weight). Sugisaki does not disclose encryption or scrambling the scrambling key. Bando discloses a digital broadcast transmission system wherein the scrambling key is encrypted (Col. 1, lines 35-36). It would have been obvious to one of ordinary skill in the art at the time the invention was made to encrypt the scrambling key of Sugisaki in order to protect the keys that scramble the data.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin E Lanier whose telephone number is (703)-305-7684. The examiner can normally be reached on M-Th from 7:30am to 5:00pm, F from 7:30am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron, can be reached on (703)-305-1830. The fax phone number for the organization where this application or proceeding is assigned is (703)-746-7239, after final (703)-746-7238, or non-official/draft (703)-746-7240.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

GILBERTO BARRON
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